



ARYAN SCHOOL OF ENGINEERING & TECHNOLOGY

Dicipline:	MINING	Semester: 4th	Name of the Teaching Faculty: Debashish pradhan.	
Subject: MINE SURVEY – II	No of Days/Week Class Allotted: _____	Semester From date: 10/08/22 To date 18/06/23	No.of Weeks:	
WEEK	Class Day	Theory Topics		
1	1st	Introduction to Tacheometry.		
	2nd	Defining of stadia & its principle.		
	3rd	Explaining of diaphragm, reticules of tacheometer.		
	4th	Explaining of tacheometer, instruments constants.		
	5th			
2	1st	Finding of height & distance from stadia intercepts.		
	2nd	Finding of height & distance from stadia intercepts.		
	3rd	Finding of height & distance from tangential system method.		
	4th	Finding of height & distance from tangential system method.		
	5th			
3	1st	Finding of height & distance from movable hair method.		
	2nd	Introduction to Triangulation and Trilateration.		
	3rd	Purpose & principle involved in triangulation & trilateration method.		
	4th	Purpose & principle involved in triangulation & trilateration method.		
	5th			

WEEK	Class Day	Theory Topics
4	1st	Classification various methods of triangulation survey primary, secondary & tertiary colliery triangulation.
	2nd	Classification various methods of triangulation survey primary, secondary & tertiary colliery triangulation.
	3rd	Explanation to Development concept about reconnaissance survey.
	4th	Description methods of measuring angle, types of theodolite used in triangulation survey.
	5th	
5	1st	Description methods of measuring angle, types of theodolite used in triangulation survey.
	2nd	Discussion of methods of base line measurement using E.D.M.
	3rd	Discussion of methods of base line measurement using E.D.M.
	4th	Defining tape correction.
	5th	
6	1st	construction of triangulation station of permanent nature.
	2nd	construction of triangulation station of permanent nature.
	3rd	Description to single unit and double unit face.
	4th	Description to single unit and double unit face.
	5th	

WEEK	Class Day	Theory Topics
7	1st	Introduction to Correlation of surface and underground survey.
	2nd	Description to direct correlation by traversing.
	3rd	Description to direct correlation by Optical method
	4th	Description of orientation by wires in two shafts.
	5th	
8	1st	Description of orientation by wires in two shafts.
	2nd	Explanation of correlation by mines in vertical shafts.
	3rd	Explanation of correlation by mines in vertical shafts.
	4th	Discussion to co-planning/ alignment method.
	5th	
9	1st	Discussion to weissbach triangle weis-quadrilateral methods.
	2nd	Discussion to precise magnetic correlation.
	3rd	Introduction to Setting out curves & elements of curves.
	4th	Defining designation of curves, simple, compound & reverse curves.
	5th	

WEEK	Class Day	Theory Topics
10	1st	Defining designation of curves, simple, compound & reverse curves.
	2nd	Explain setting out of surface & underground curves by chords & offsets, chords and angle.
	3rd	Explain setting out of surface & underground curves tangent and offset, plate layers method.
	4th	Description of various setting out by chain & one theodolite, two theodolites.
	5th	
11	1st	Description of various setting out by chain & one theodolite, two theodolites.
	2nd	Defining of super elevation, transition and vertical curves.
	3rd	Defining of super elevation, transition and vertical curves.
	4th	Introduction to Stope Surveying.
	5th	
12	1st	Explanation to tape instrumental survey.
	2nd	Explanation to tape triangulation survey.
	3rd	Determining of stope face.
	4th	Preparation of stope planes, plotting the stope station, plotting of stope face to the mine plan.
	5th	

TECHNOLOGY

WEEK	Class Day	Theory Topics
13	1st	Preparation of stope planes, plotting the stope station, plotting of stope face to the mine plan.
	2nd	Finding area of extraction by Planimeter and calculation of triangle thereof
	3rd	Finding area of extraction by Planimeter and calculation of triangle thereof
	4th	Explaining the basic principles of global positioning system & total station.
	5th	
14	1st	Explaining the basic principles of global positioning system & total station.
	2nd	Introduction to DGPS.
	3rd	Introduction to DGPS.
	4th	
	5th	
15	1st	
	2nd	
	3rd	
	4th	
	5th	